

REMARKS

Claims 21 and 22 were pending in this case.

Provisionally elected claims 21 and 22 were rejected. Claims 21 and 22 have been amended in response to the Examiner's rejections. New claims 23-28 have been added. No new matter is introduced by the amendments. In view of the preceding amendments and the following remarks, Applicant respectfully requests inclusion of claims 23-28 and reconsideration of the application.

Rejection under 35 U.S.C §102(e)

In paragraph 3 of page 2, claims 1-7 were rejected under 35 U.S.C. §102(e), as being anticipated by *Fujita et al.* (US Pat. App. No. 2003/0085994). The Examiner stated that:

In regards to claims 21-22, Fujita et al. disclose a capsule imaging device having communication means and a battery and an imaging means, the capsule imaging system comprising: an ultra-wideband system for the imaging means (see paragraph 0122).

The Examiner's rejection is respectfully noted and the claims have been amended to clarify and distinguish the invention, since *Fujita et al* disclose an ultra-wideband system only for communication, not for imaging. Further details are provided in Appendix A attached below.

Thus, *Fujita et al* do not anticipate the invention claimed in amended independent claim 21 and 22, and thus do not anticipate amended independent claims 21 and 22 under 35 U.S.C. §102(e). In view of the discussion above, Applicant respectfully requests that the Examiner withdraw the 35 U.S.C. §102(e) rejection of amended independent claim 21 and 22.

New dependent claims 23-28 are also respectfully submitted to be patentable, for at least the same reasons discussed above with respect to amended independent claims 21

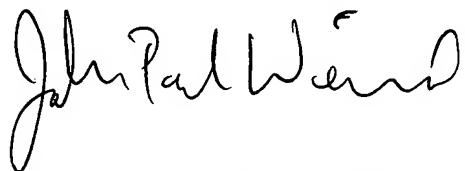
and 22. Accordingly, in view of the discussion above, Applicant respectfully requests that the Examiner allow inclusion of new dependent claims 23-28.

SUMMARY

In conclusion, claims 21-28 are pending in this application. Independent claims 21 and 22 have been amended in response to the Examiner's rejection. New dependent claims 23-28 have been added. Applicant respectfully requests that the Examiner withdraw the rejections of the pending claims and pass the application to issue.

All correspondence should continue to be directed to the address previously indicated.

Respectfully submitted,



Dated: May 16, 2006

John Paul Weirich

Appendix A

The office action mailed on 02/03/2006 states:

“Claims 21-22 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application No. 2003/0085994 to Fujita et al.

In regards to claims 21-22, Fujita et al. disclose a capsule imaging device having communication means and a battery and an imaging means, the capsule imaging system comprising: an ultra-wideband system for the imaging means (see paragraph 0122).”

Paragraph 0122 states, “If the UWB technology is incorporated into a radio communication device for a capsule-type medical device, a frequency having a long wavelength can be used, which is easily transparent to a human body, for example.”

This indicates that Fujita et al. anticipate that the ultra-wideband (UWB) device will be used only as communication means, not as the imaging means of the capsule.

This is further enforced by the fact that the UWB technology they anticipate using will have “a long wavelength which is easily transparent to a human body”. In order to have an UWB capsule imaging device, the emitted UWB signals must be reflected back from or be absorbed by the body tissues, not pass through the tissues easily.

It is notable that the Fujita et al. patent application does not claim, mention in passing, or hint at the use of an UWB imaging device, while it does claim many other types of sensory means available.

These are the spots where they specify different types of sensory means:

1. Paragraph (PPg) 0051 mentions, “A CMOS image-pickup element 17”, as do PPgs 0052, 0063 and 0098.
2. PPg 0098 points out, “Three kinds of image pickup elements may be used as described below in variation examples.” These three are subsequently detailed.
3. PPg 0099 describes one as an “artificial retina”, as do PPgs 0100 and 0101, and 0107 lists the different types of “artificial retinas” available on the market.
4. PPg 0108 states, “Second variation uses a threshold value modulation type image sensor (VMIS), which is the next generation image sensor having both merits of the CCD and the CMOS image-pickup element.” This is not an UWB imaging

- device. Particular VMIS devices are listed in PPg 0114. PPg 0115 talks more of the “artificial retina”.
5. PPg 0116 states, “Third variation is a color image sensor for obtaining color signals of RGB in one pixel.” This is not an UWB device, but probably a visible light imaging device like that available from FOVEON Corp.

This has so far described the “three kinds of image pickup elements” from point 2.

Now moving on to the UWB device presented in Fujita’s patent application.

6. PPg 0122 further states, “power consumption for the radio communication device can be suppressed.” Here the “communication device” being referred to is the “typical pulse radio, an ultra wideband (UWB) technology” they describe in the first sentence of PPg 0122. They are saying the UWB device is for communication not imaging purposes.
7. PPg 0125 identifies a “pH sensor”, as do PPgs 0126, 0128, 0129, 0168, 0169, 0170, 0173.
8. PPg 0172 identifies a “collecting tool” “such as an ileus tube”.
9. PPg 0173 states, “a temperature sensor, a pressure sensor, a light sensor or a blood sensor may be adopted.”
10. PPg 0176 identifies “an ultrasonic wave probe” “instead of the sensor”.
11. PPg 0182 identifies “a permanent magnet and a body fluid sucking portion”.
The magnet is also mentioned in PPgs 0185 and 0191.
12. PPg 0192 states “using a blood sensor or observation means”.

None of these references anticipates an ultra-wideband imaging means.

Nearly all of these devices referred to in the body of the patent application are included in the claims.

Claim 3, “image pickup device including an objective lens”.

Claim 4 and 26, “CMOS image-pickup element or a threshold value modulating type image sensor.”

Claim 5 and 27, “so-called artificial retina”.

Claim 8 and 29 and 37, “living body information detecting device is at least one of a pH sensor, a temperature sensor, a pressure sensor, a light sensor, and a blood sensor.”

Claim 9 and 30, “detecting device is an ultrasonic wave probe.”

Claim 17. “having a living body information detecting device for obtaining living body information;”.

Claim 25, “image pickup device”.

Claim 40. “color image sensor”.

Claim 41, “CMOS image sensor.”

Then, the UWB device is mention in Claim 44, which states:

“44. The capsule-type medical device according to claim 43, wherein the *communication means* is an ultra wideband (UWB) method.”

“Communication means” is emphasized to make the point that Fujita et al. had no thought of claiming the UWB device as the imaging means for their capsule.

SUMMARY

It would have been simple for Fujita et al. to claim an ultra-wideband imaging means for their capsule endoscopy device. All they had to do is add a single claim to their list of claims.

They did not claim this because it did not occur to them to use an UWB circuit as an imaging sensor. They only thought of employing an UWB circuit for communication means. This shows that it is not an obvious leap to use UWB circuits for imaging, especially inside a capsule device. They did not think of this.

It is surprising that they did not claim an UWB imaging means, as they did claim a multitude of other sensor means for their capsule.

Therefore I believe my patent for a capsule endoscopy device including UWB sensor imaging means should be granted, since this is a new invention with the non-obvious use of new technology in a novel application.

The claim that I make, using an UWB sensor as the imaging means, is of the same type of claim that Fujita et al. make employing other types of sensors (such as CMOS, artificial retina, etc.) as their imaging means. If their claims of this sort are granted, then mine too should be granted, by the same line of reasoning. I think my claim is less obvious than their claims, as evidenced by the fact that they did not claim it.

Thank you for your time and consideration.